BOROUGH 

COUNTY

OF

BURTON-UPON-TRENT.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR 1904,

BY

JAMES M. COWIE, M.D., D.P.H.,

Medical Officer of Health, Medical Superintendent of Borough Isolation Hospital, and Public Analyst.

ALSO REPORT OF THE
SANITARY INSPECTOR
AND REPORT OF THE
SUPERINTENDENT of the NIGHT-SOIL DEPARTMENT.

"HONOR ALIT ARTES."

County Borough of Burton-upon-Trent.

HEALTH COMMITTEE.

THE MAYOR (ALDERMAN A. J. ROBERTS).

Chairman : ALDERMAN PARKER.

ALDERMAN T. TURNER.	COUNCILLOR A. BATES.
„ J. R. MORRIS.	„ F. J. CROAD.
COUNCILLOR W. AUSTIN.	„ G. KENNARD.
„ J. W. A. BASSETT.	„ G. LATHBURY.
	„ E. C. STACK.

Town Clerk :
MR. T. N. WHITEHEAD.

Borough Surveyor:
MR. G. T. LYNAM,
Assoc. M. Inst. C.E.

Medical Officer's Department.

Chief Sanitary Inspector : WM. READING.

Assistant Sanitary Inspector : A. HUMPHRIES.

„ „ „ J. JENKINSON, A.S.I.

Clerk : C. GAUNT.

Matron of Borough Hospital : MISS BURTENSHAW.

Medical Officer of Health and Public Analyst } JAMES M. COWIE, M.D., D.P.H.

County Borough of Burton-upon-Trent.

SUMMARY OF STATISTICS.

Area in acres	4,204
Rateable Value	£333,259
Population at Census, 1901	50,386
Number of Persons to the Acre, 1901	12·0
Number of Persons per House at Census, 1901 ...	4·91
Estimated Population at Mid year, 1904	51,934
Estimated Birth-rate per 1,000 living, 1904 ...	26·0
Average Birth-rate for previous 10 years	29·4
Estimated Death-rate per 1,000 living, 1904 ...	15·05
Average Death-rate for previous 10 years	16·0
Deaths under 1 year to 1,000 births, 1904	118
Death-rate from Zymotic Diseases, 1904	1.52

Infectious Diseases Notification Act, 1889, adopted December, 1892.

Infectious Diseases Notification Act re-applied to Measles (for 3 years), December, 1899.
(Notification of Measles discontinued November, 1902.)

Infectious Diseases Prevention Act, 1890, adopted November, 1891.

Public Health Amendment Act, 1890, Part iii, adopted March, 1897.

Burton-upon-Trent Corporation Act, 1896.

Burton-upon-Trent Corporation Act, 1901.

Health Office,

Town Hall,

Burton-upon-Trent,

3rd April, 1905.

TO THE CHAIRMAN AND MEMBERS OF THE HEALTH COMMITTEE.

Gentlemen,

I have the honour to submit to you my First Annual Report, being the report on the health of the County Borough of Burton-upon-Trent for the year 1904.

The principal feature of the year was the decrease in the number of notifiable infectious diseases—a number lower than in any previous year. This favourable feature, however, was counterbalanced by a severe epidemic of whooping cough and an epidemic of measles.

The death rate was much higher than the record established in the previous year, but was slightly under the average for the Borough, and was lower than the rate in the Country as a whole.

The birth rate continues to decrease.

The important subject of Cancer receives detailed consideration.

An important addition to the measures in force for the protection of the milk supply was made during the year when Part 8 of the Burton-upon-Trent Corporation Act, 1901, which deals with tuberculous milk was put in operation.

The work at the Borough Hospital is set out in detail in the Report, and has been most efficiently carried out by Miss BURTENSHAW and the Nurses under her charge.

I have also to record my indebtedness to Mr. READING the Chief Sanitary Inspector who has rendered me most willing and valuable assistance. The Assistant Sanitary Inspectors and Mr. GAUNT have also carried out their duties in a satisfactory manner.

I am, Gentlemen,

Your obedient Servant,

JAMES M. COWIE,

Medical Officer of Health.

REPORT.

SITUATION.—The County Borough of Burton-upon-Trent is situated in the valley of the river Trent and on both its banks, in the Counties of Stafford and Derby. The east arm of the river forms the boundary between the counties so that the part of the town on the right bank of this part of the river is in Derbyshire and that on the left bank in Staffordshire. The mean elevation above sea level of the Derbyshire part of the town is 250 feet, and of the Staffordshire part of the town 150 feet. The highest elevation is 420 feet above sea level near the site of Moat Bank House, Ashby Road. The town is situated in N. Lat. 52° 48′ W. Long. 1° 38′.

AREA.—The area of the Borough is just under 4,204 acres.

POPULATION.—For statistical purposes it is a matter of supreme importance that an accurate enumeration of the population should be available. The actual population of the Borough and its divisions is known only at the decennial Census enumerations, so that for statistical purposes one has to rely on one of the various methods for estimating the population. All calculations are made on the population at the middle of the year, and as the Census is taken in the spring this applies to the year of the Census as well as to other years. As all the methods are more or less inaccurate it follows that the further you get from the Census the greater the error becomes. The usual method of estimating the population is that of the Registrar-General, which is

based on the assumption that the proportionate rate of increase during the year would be the same as during the intercensal period 1891-1901. By this method the population of the Borough at the middle of 1904 was estimated to be 51,934.

NATURAL INCREASE.—The excess of births over deaths is the natural increase, and if this were known since the Census, and one also knew the amount of emigration and immigration it would be possible to calculate the population accurately at any given time. Accurate records of births and deaths are available, but no record of immigration or emigration.

Year.	Births.	Deaths.	Natural Increase.
From Census 1901 ...	1,064	532	532
1902 ...	1,365	705	660
1903 ...	1,366	653	713
1904 (½ of)...	675	412	263
Totals	4,470	2,302	2,168

Population Census, 1901	50,386
Population estimated middle of 1904 ...	51,934
	1,548

The estimated increase is thus only 1,548 as compared with a natural increase of 2,168. As the estimated population is not likely to be very far wrong owing to the proximity of the Census it will be seen that the emigrants are more numerous than the immigrants, an unusual state of affairs in a prosperous urban community. There is no reason to think that this is not the case, as the same state of affairs was present during 1891-1901, as is shown in the following table :—

Year.	Births.	Deaths.	Natural Increase.
¾ of 1891	1,227	558	669
1892	1,511	913	598
1893	1,625	760	865
1894	1,533	756	777
1895	1,572	793	779
1896	1,512	854	658
1897	1,430	758	672
1898	1,463	765	698
1899	1,429	772	657
1900	1,390	971	419
¼ of 1901	321	210	111
Totals	15,013	8,110	6,903

Population Census, 1891	...	...	46,047
Population Census, 1901	...	...	50,386
		Actual increase,	4,339

Hence it will be seen that the number of persons leaving the town during these 10 years was greater than the number coming to the town by 2,564.

WARD POPULATIONS.—For the purpose of civil administration, Burton was divided into eight Wards by the Burton-upon-Trent Corporation Act, 1901. The populations of these Wards are set forth in the Census returns for Staffordshire 1901, but the accurate estimation of the population as at the middle of 1904 is a matter of some difficulty. For some years there has been a tendency for the population to leave the centre of the town for the outskirts, and since the inauguration of the electric tramway system this tendency has been undoubtedly increased, and hence the population of the outer Wards are increased at the expense of the central Wards. The most accurate method available for the estimation of the Ward populations is founded on the number of inhabited houses at the middle of the year. The number of

houses in each Ward is known. Mr. Lynam, the Borough Engineer and Surveyor, has kindly furnished me with the number of new houses certified as fit for occupation, and also the number of houses demolished in each Ward, since the Census. This information is given in the following table:—

Year.	Shobnall Ward.		Victoria Ward.		Horninglow Ward.		Uxbridge Ward.		Broadway Ward.		Burton Ward.		Winshill & Wetmore Ward.		Stapenhill Ward.		TOTALS.	
	Houses Erected.	Houses Demolished.	Houses Erected.	Houses Demolished.	Houses Erected.	Houses Demolished.	Houses Erected.	Houses Demolished.	Houses Erected.	Houses Demolished.	Houses Erected.	Houses Demolished.	Houses Erected.	Houses Demolished.	Houses Erected.	Houses Demolished.	Houses Erected.	Houses Demolished.
1901 *Up to Dec. 31st*	17	0	73	0	85	0	38	0	0	0	0	0	11	0	13	0	237	0
1902	25	0	57	1	56	0	53	0	8	0	0	25	7	0	34	1	240	27
1903	11	0	89	0	26	0	37	0	2	0	6	5	14	0	18	0	203	5
1904	9	4	28	0	46	0	50	0	0	0	0	0	10	0	21	0	164	4
TOTALS	62	4	247	1	213	0	178	0	10	0	6	30	12	0	86	1	844	36

It is thus evident that building operations are going on at a great rate in the Victoria, Horninglow, and Uxbridge Wards, while in the Burton Ward 30 houses have been demolished as against 6 new houses erected. The population in these three Wards then must be increasing at a much higher rate than the other Wards, unless a large number of houses are standing empty, and this question of empty houses must also be considered along with that of new houses. I am much indebted to Mr. Arnold, Borough Treasurer and Superintendent Assistant Overseer, for the following information as regards empty houses in June and July, 1904—

EMPTY HOUSES.

Shobnall	34
Victoria	28
Horninglow	27
Uxbridge	32
Broadway	21
Burton	59
Winshill and Wetmore	21
Stapenhill	17
Total ...	239

This table again emphasises the decreasing population in the centre of the town. Applying the above information the populations in the various Wards are estimated to be as follows—

Ward.	Population 1904.	Population Census 1901.
Shobnall	7,240	7,144
Victoria	6,475	5,962
Horninglow	6,466	6,043
Uxbridge	7,402	7,052
Broadway	6,805	6,793
Burton	5,820	5,906
Winshill and Wetmore ...	6,122	6,060
Stapenhill	5,604	5,426
Totals ...	51,934	50,386

DENSITY OF POPULATION.—The number of persons per acre estimated to middle of 1904 was 12·3.

BIRTHS.—The number of births registered during the year was 1,354 as compared with 1,366 last year. Notwithstanding an estimated larger population there is thus a decrease of 12 births as compared with last year and of 90 as compared with the average for the previous 10 years.

The birth rate was equal to 26·0 per 1,000 of the estimated population. This rate is 0·5 lower than last year, and 3·4 below the average of the previous 10 years.

The birth-rate for England and Wales for 1904 was 27·9.

The decline in the birth-rate which has been going on with varying fluctuations from 44·2 in 1882 to 26·0 last year is a matter of great importance.

This decline is not confined to Burton but is also found in the country as a whole, and indeed in the whole civilised world.

The highest birth-rate was recorded in the Stapenhill Ward where the rate was 31·7 per 1,000, and the lowest in the Burton Ward where the rate was 20·4 per 1,000.

Of the 1,354 births, 705 were of males and 649 of females; of these 28 males and 26 females were illegitimate.

The percentage of illegitimate births was 4·0 as compared with 3·7 last year, and an average of 4·0 for the previous 10 years, and varied from 10·1 per cent. in the Shobnall Ward to 1·0 per cent. in the Uxbridge Ward. The high percentage in the Shobnall Ward is due to the workhouse. High rates were also found in Victoria, Burton, and Stapenhill Wards.

These facts are shown in the following table—

WARD.	Population.	Total Number of Births.	Illegitimate Births.	Percentage of Illegitimate Births.	Birth Rate.
Shobnall	7,240	178	18	10·1	24·5
Victoria	6,475	174	9	5·1	26·8
Horninglow	6,466	185	5	2·7	28·6
Uxbridge	7,402	198	2	1·0	26·7
Broadway	6,805	195	4	2·0	28·6
Burton	5,820	119	6	5·0	20·4
Winshill and Wetmore	6,122	127	2	1·6	20·7
Stapenhill	5,604	178	8	4·5	31·7
TOTALS ...	51,934	1,354	54	4 0	26·0

TOTAL BIRTHS, 1904.

WARDS.

Month.	Shobnall.		Victoria.		Horninglow.		Uxbridge.		Broadway.		Burton.		Winshill and Wetmore.		Stapenhill.		TOTALS.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
January	8	3	4	5	8	4	10	11	5	12	4	5	5	6	6	2	50	48
February	6	7	4	4	12	15	6	6	4	10	1	10	5	3	7	10	45	65
March ...	7	5	6	6	6	6	7	11	10	10	6	5	5	6	9	10	56	59
April ...	6	13	9	7	14	5	8	2	3	5	1	7	5	10	11	7	57	56
May ...	7	4	5	5	9	7	8	10	8	6	5	6	5	8	8	9	55	55
June ...	7	6	11	5	7	7	16	9	10	11	10	6	2	4	5	9	68	57
July ...	11	9	7	8	8	7	7	7	8	9	5	5	3	7	10	7	59	59
August	13	5	11	12	8	7	8	8	9	6	5	6	9	6	5	7	68	57
Sept. .	10	3	6	11	9	6	12	7	9	5	3	4	8	4	3	7	60	47
October	8	5	8	3	8	4	11	7	11	12	5	7	7	3	7	6	65	47
Nov. ...	12	5	8	9	5	9	9	5	11	9	4	3	4	1	7	12	60	53
Dec. ...	9	9	11	9	11	3	9	4	5	7	3	3	6	5	8	6	62	46
Totals ...	104	74	90	84	105	80	111	87	93	102	52	67	64	63	86	92	705	649
Illegitimate	12	6	3	6	3	2	1	1	3	1	2	4	1	1	3	5	28	26

The total number of illegitimate children is 54. During the year there were recorded 17 deaths of illegitimate children under 1 year of age, and 4 over 1 year of age. This shows the very high mortality amongst such children.

The following table shows the birth-rate per 1,000 of the population during the year 1904, for a number of towns of similar size to Burton—

Town.	Estimated Population, 1904.	Birth-rate per 1000, 1904.
Aberdare	47,250	33·76
Ashton-under-Lyne	44,541	27·0
Aston Manor	80,363	29·1
Bath	49,800	20·76
Blackpool	54,338	21·53
Bootle	62,000	30·9
BURTON-ON-TRENT	51,934	26·07
Bury	58,450	23·66
Carlisle	37,350	26·9
Coventry	73,904	31·4
Cheltenham	50,500	19·0
Crewe	46,065	30·9
Hanley	63,889	33·8
Huddersfield	94,936	23·71
Ipswich	69,805	27·5
Lancaster	43,570	24·48
Leigh	43,000	33·18
Merthyr Tydfil	72,745	38·5
Northampton	90,340	23·3
Oxford	50,506	21·77
Newport (Mon.)	71,543	32·7
Swansea	98,380	30·5
Swindon	48,200	30·0
St. Helens (Lanc.)	88,740	37·33
Tynemouth	53,022	34·91
Wallasey	57,000	29·43
West Bromwich	67,186	33·5
Wigan	64,249	34·59
Wolverhampton	98,268	29·8
Wimbledon...	47,719	23·9
Warrington...	68,490	32·7
York	81,268	28·15

MARRIAGES.—The number of marriages solemnized in Burton during 1904 was 498. A small number of these took place at the Registrar's Office between persons not residing within the Borough. This gives a marriage-rate

of 9·6 per 1,000 of the population; a very low rate when compared with that of the country as a whole. Dr. Farr has described the marriage-rate as the barometer of prosperity (present in part but future anticipated prosperity in still greater part) and this being so it is to be regretted that the marriage-rate in Burton shows no tendency to increase. However, the rate is the same as last year and greater than 1902.

I am indebted to Alfred Coxon, Esq., Superintendent Registrar of the District of Burton-on-Trent for the following figures relating to the number of marriages—

	1904.	1903.	1902.
First Quarter ...	83	96	92
Second Quarter ...	138	119	122
Third Quarter ...	142	155	123
Fourth Quarter ...	135	127	127
Total ...	498	497	464

The figures for previous years in Burton and in England and Wales are given in the following table—

	Total number of marriages in Burton.	Marriage-rate per 1,000 of the population in Burton.	Marriage-rate per 1,000 of the population in England and Wales.
1890 ...	415	9·1	15·5
1891 ...	379	8·2	15·6
1892 ...	421	9·0	15·4
1893 ...	422	9·0	14·7
1894 ...	424	9·0	15·0
1895 ...	421	8·8	15·0
1896 ...	394	8·2	15·7
1897 ...	476	9·8	16·0
1898 ...	484	9·9	16·2
1899 ...	482	9·7	16·5
1900 ...	455	9·1	16.0
1901 ...	533	10·3	15·9
1902 ...	464	9·1	15·8
1903 ...	497	9.6	15·7
1904 ...	498	9·6	—

DEATHS.—The total number of deaths registered during the year was 815. Of these 453 were of males and 362 of females. Included in this number are 26 males and 16 females not belonging to the Borough, and these have to be deducted. Again, the deaths of 4 males and 5 females belonging to the Borough whose death took place outside the Borough have to be added. The nett number of deaths is, therefore, 431 males and 351 females—a total of 782.

The nett death-rate corrected for institutions was 15·05 per 1,000 of the estimated population, as compared with 11·89 last year, and an average of 16·0 for the previous 10 years.

The death-rate for England and Wales was 16·2.

DEATH-RATES IN THE VARIOUS WARDS.

Wards.	Number of Deaths.	Death-rate per 1,000.
Shobnall	146	20·1
Victoria	96	14·8
Horninglow	85	13·1
Uxbridge	110	14·8
Broadway	93	13·6
Burton	113	19·4
Winshill and Wetmore ...	72	11·7
Stapenhill	67	11·9
Totals	782	15·05

The high death-rate recorded in the Shobnall Ward is caused by the fact that in a large number of instances where a death took place in the Workhouse the previous address was not given, and so the death could not be transferred to the original address.

Apart from this, the highest death-rate was recorded in Burton Ward, and the lowest in Winshill and Wetmore.

CORRECTED DEATH-RATE.—In order that the death-rates of different places can be fairly compared it is essential to know whether the respective populations are made up of the sexes in the same proportion, and whether they contain the same proportion of persons in the various age groups.

If a district contains a large proportion of infants or of very old persons, then as the death-rate at such ages is very high, it would not be a fair test to compare such a district with one where similar conditions did not exist. Similarly as the death-rate among females is lower than among males a large proportion of females in a population would tend to lower the rate. To correct a death-rate, therefore, for age and sex distribution the Registrar General has published tables giving the factors by which the recorded death-rate has to be multiplied. For Burton the factor is 1·0756, and this multiplied into the recorded death-rate gives a death-rate corrected for age and sex distribution of 16·18.

The following table gives the death-rate in a number of towns of similar size to Burton.

Town.	Estimated Population, 1904	Death-rate per 1,000, 1904
Aberdare	47,250	25·56
Ashton-under-Lyne ...	44,541	17·2
Aston Manor	80,363	15·8
Bath	49,800	14·78
Blackpool	54,338	12·33
Bootle	62,000	18·6
BURTON-ON-TRENT ...	51,934	15·05
Bury	58,450	17·14
Carlisle	37,350	19·7
Coventry	73,904	15·5
Cheltenham	50,500	14·1
Crewe	46,065	14·5
Hanley	63,889	21·2
Huddersfield	94,936	17·51
Ipswich	69,805	15·5
Lancaster	43,570	13·01
Leigh	43,000	16·55
Merthyr Tydfil	72,745	19·7
Northampton	90,340	13·1
Newport (Mon.)	71,543	15·7
Oxford	50,506	12·69
Swansea	98,380	17·7
Swindon	48,200	12·49
St. Helens (Lanc.)	88,740	20·39
Tynemouth	53,022	19·4
Wallasey	57,000	16·05
West Bromwich	67,186	15·9
Wigan	64,249	21·49
Wolverhampton	98,268	14·6
Wimbledon	47,719	10·2
Warrington	68,490	20·9
York	81,268	16·18

CAUSES OF DEATH.—It will be well now to consider the causes of the increased death-rate, to balance the gains and losses under the various causes of death.

GAINS.

Diseases.	No. of Deaths, 1903.	No. of Deaths, 1904.	Decrease.
Small-pox	1	0	1
Enteric Fever	1	0	1
Rheumatic Fever... ...	1	0	1
Other Septic Diseases ...	1	0	1
Other Tubercular Diseases	20	19	1
Cancer	56	44	12
Alcoholism and Cirrhosis of the Liver	21	17	4
Marasmus and Premature Birth	53	49	4
Suicides	5	4	1
Totals ...	159	133	26

LOSSES.

Diseases.	No of Deaths, 1903.	No. of Deaths, 1904.	Increase.
Measles	4	5	1
Whooping Cough ...	8	41	33
Diphtheria and Membranous Croup	4	7	3
Epidemic Influenza ...	4	25	21
Diarrhœa	16	21	5
Enteritis	5	11	6
Puerperal Fever	0	1	1
Erysipelas	0	3	3
Phthisis	57	76	19
Bronchitis	47	69	22
Pneumonia	29	47	18
Pleurisy	1	3	2
Other Diseases of Respiratory Organs	3	7	4
Venereal Diseases ...	0	6	6
Heart Diseases	53	69	16
Accidents	14	25	11
Hemiplegia and Apoplexy	12	14	2
Convulsions	8	11	3
Bright's Disease, not Certified, all other causes...	134	152	18
Totals ...	399	593	194

Scarlet fever (6 deaths), diseases and accidents of parturition (4 deaths), and old age (47 deaths) each caused the same number of deaths as last year. There was an increase under almost all the chief headings. With one exception there was no notable decrease. The exception referred to was cancer, which showed a decrease of 12 deaths as compared with the previous year. The chief increases are noted amongst the deaths from whooping cough, bronchitis, influenza, phthisis, pneumonia, heart disease, and accidents.

Whooping cough was not prevalent during 1903, but a very severe epidemic was present during the greater part of 1904. Influenza was also very prevalent towards the close of the year. The increase in the respiratory diseases was due to the prevailing fogs and damp weather towards the end of the year, and no doubt partly also to the prevalence of whooping cough, measles, and influenza, where chest complaints are common complications, as in some cases the deaths would probably be certified as due to the complication instead of the primary illness. These same diseases contracted by a phthisical patient or a patient suffering from heart disease would certainly hasten the end.

Hence the chief cause of the increased death-rate was the prevalence of whooping cough, influenza, and measles, during the year.

UNCERTIFIED DEATHS AND INQUESTS.

During the year there were 55 deaths registered in which the cause of death was not certified by a medical practitioner. Nine of those were uncertified, and in 46 inquests were held and the verdicts of the coroner's juries were recorded as follows—

INQUESTS, 1904.

Cause of Death.	Number of Deaths.
Neglect of mother	1
"Overlaying"	4
Burns	7
Natural causes	10
Fall of coal	1
Appendicitis (operation)	1
Run over by vehicle	4
Pneumonia following fractured leg ...	1
Suicide by cutting throat	3
Fall down stairs	4
Accidently drowned	1
Killed by railway engine	1
Fall out of bed	1
Overdose of solution of ammonia ...	1
Shock, following fractured thigh ...	2
Fall through door-trap of hoist ...	1
Suicide by railway train	1
Found drowned	1
Fractured skull, caused by falling tile	1
Total	46

In the 9 uncertified deaths the probable cause of death was given as under—

Age.	Sex.	Probable cause of death.
68 years.	F.	Acute bronchitis.
56 years.	M.	Heart failure.
6 months.	M.	Convulsions.
19 years.	M.	Apopletic fit.
1 day.	M.	Premature birth.
$1\frac{3}{4}$ years.	F.	Pneumonia.
80 years.	F.	Heart disease.
4 months.	M.	Convulsions.
1 day.	F.	Inanition.

INFANTILE MORTALITY.—The mortality amongst children under 1 year of age is what is known as the infantile mortality, and when the number of deaths at this age period is expressed as a rate per 1,000 of the births during the same year we have the infantile mortality rate.

The number of deaths amongst children under 1 year of age was 160; the number of births during the year was 1,354. This gives an infantile mortality rate of 118 per 1,000 births as compared with 89 last year.

The rate in England and Wales was 146.

INFANTILE MORTALITY.

	1904.	1903.	1902.	1901.	1900.
Total number of deaths under 1 year of age	160	121	155	148	199
Total number of births registered	1,354	1,366	1,365	1,385	1,390
Infantile Mortality (deaths per 1,000 births)	118	89	113	106	143
Infantile Mortality (England and Wales)	146	132	133	151	154
Infantile Mortality (76 great towns)	160	144	145		
Average Infantile Mortality in Burton for the 10 years 1894—1903	126				

"This rate of infantile mortality is regarded as a most reliable test of the sanitary condition of a district owing to the fact that migration does not greatly affect the result at this early age. If the 'sanitary condition' be regarded as including the complex conditions comprised in differences of social status this is doubtless correct" (Newsholme).

This being so it will be well to compare the infantile mortality rate in Burton with other towns of similar size.

Town.	Estimated Population, 1904.	Infantile Mortality. 1904
Ashton-under-Lyne	44,541	172·0
Aston Manor	80,363	187·0
Bath	49,800	111·0
Blackpool	54,338	160·0
Bootle	62,000	180·0
Burton-on-Trent	**51,934**	**118·0**
Bury	58,450	163·0
Carlisle	37,350	152·0
Coventry	73,904	137·0
Cheltenham	50,500	133·0
Crewe	46,065	169·0
Hanley	63,889	206·0
Huddersfield	94,936	136·0
Ipswich	69,805	140·0
Lancaster	43,570	153·0
Leigh	43,000	192·0
Merthyr Tydfil	72,745	186·0
Northampton	90,340	132·0
Newport (Mon.)	71,543	149·0
Oxford	50,506	112·0
Swansea	98,380	172·0
Swindon	48,200	111·0
St. Helens (Lanc.)	88,740	174·0
Tynemouth	53,022	152·0
Wallasey	57,000	157·0
West Bromwich	67,186	149·0
Wigan	64,249	188·0
Wolverhampton	98,268	152·0
Wimbledon	47,719	133·0
Warrington	68,490	171·0
York	81,268	170·0
England and Wales	—	146·0
76 Great Towns	—	160·0

On looking over the above list it will be observed that only three towns have a lower infantile mortality-rate and these are Bath, Swindon and Oxford, all of which are comprised of populations of different social statns to Burton. At least two of these are residential towns, and being so the children are better cared for than in the population of a manufacturing town like Burton.

Judged by this standard the sanitary condition of Burton is satisfactory in comparison with other towns.

INFANTILE MORTALITY IN WARDS.

Ward.	Number of Births.	Percentage of Illegitimate Births.	Number of Deaths under 1 year.	Infantile Mortality Rate.
Shobnall	178	10·1	30	168
Victoria	174	5·1	20	115
Horninglow ...	185	2·7	21	113
Uxbridge	198	1·0	24	121
Broadway	195	2·0	16	82
Burton	119	5·0	19	159
Winshill & Wetmore	127	1·6	13	102
Stapenhill	178	4·5	17	95
Totals	1,354	4·0	160	118

The highest rates are recorded in Shobnall, Victoria, Burton and Stapenhill Wards. These high rates correspond in some measure to a high percentage rate of illegitimacy. As already pointed out 17 of the deaths under 1 year of age were those of illegitimate children. It is an invariable rule that the mortality amongst illegitimate children is much greater than amongst children born in wedlock. It is hardly to be expected that these unfortunates would have the same care and attention as their more fortunate brethren. This is shown for a number of years in the following table as it applies to Burton :—

	1904	1903	1902	1901	1900
Deaths of legitimate infants per 1000 legitimate births.	110	83	104	102	142
Deaths of illegitimate infants per 1,000 illegitimate births.	314	235	340	229	350

The causes of death of children under 12 months of age were as follows :—

Marasmus and premature birth	48
Whooping Cough	25
Bronchitis	14
Pneumonia	11
Diarrhœa	11
Convulsions	9
Enteritis	6
Influenza	6
Accidents	6
Other Tubercular Diseases	3
Diphtheria and Membranous Croup	2
Measles	1
Erysipelas	1
Venereal Diseases	1
Diseases and Accidents to Parturition	1
Not certified	3
All other causes	12
Total ...	160

One of the principal causes of a high infantile death-rate is the prevalence of zymotic or summer diarrhœa. Although this disease was more prevalent in 1904 than during the previous year, it could not be said that the disease was present to an alarming extent, as there were only 11 deaths certified from this cause at this age period as compared with 10 in the previous year.

Apart from wasting and congenital defects the principal causes of death were whooping cough, bronchitis, and pneumonia.

DEATHS FROM TUBERCULAR DISEASES.—There were 76 deaths from pulmonary phthisis which is equal to a death rate of 1·5 as compared with a rate of 1·1 for 1903.

The following table gives the death-rates from pulmonary phthisis in Wards for a number of years—

Ward.	1904.	1903.	1902.
Shobnall	2·2	0·7	0·7
Victoria	1·8	1·5	1·1
Horninglow	0·9	1·9	0·9
Uxbridge	1·6	0·8	1·5
Broadway	1·3	0·6	0·7
Burton	1·5	1·5	1·3
Winshill and Wetmore ...	0·4	0·6	1·5
Stapenhill	1·6	1·2	0·5
Totals, for Borough ...	1·4	1·1	1·0

The number of deaths from tubercular diseases other than pulmonary phthisis was 19, which is equal to a rate of 0·4, and is similar to the rate of last year.

PREVENTIVE MEASURES.—For 3 years, although notification of tubercular diseases is not in force, all houses where deaths from pulmonary phthisis have taken place have been disinfected. Other measures to prevent the spread of tuberculosis by means of tuberculous milk will be referred to under milk supply.

ZYMOTIC DEATH RATE was 1·52 as compared with 0·7 last year. It is more fully referred to under infectious diseases.

CANCER.

During the year there were 44 deaths from cancer registered as against 56 last year. The number of deaths from this cause varies greatly from year to year, but there has certainly been an upward tendency during the last 25 years. The term cancer as used for statistical purposes is a general one, and includes all diseases scheduled under the names of malignant disease, carcinoma, cancer, sarcoma, rodent ulcer,

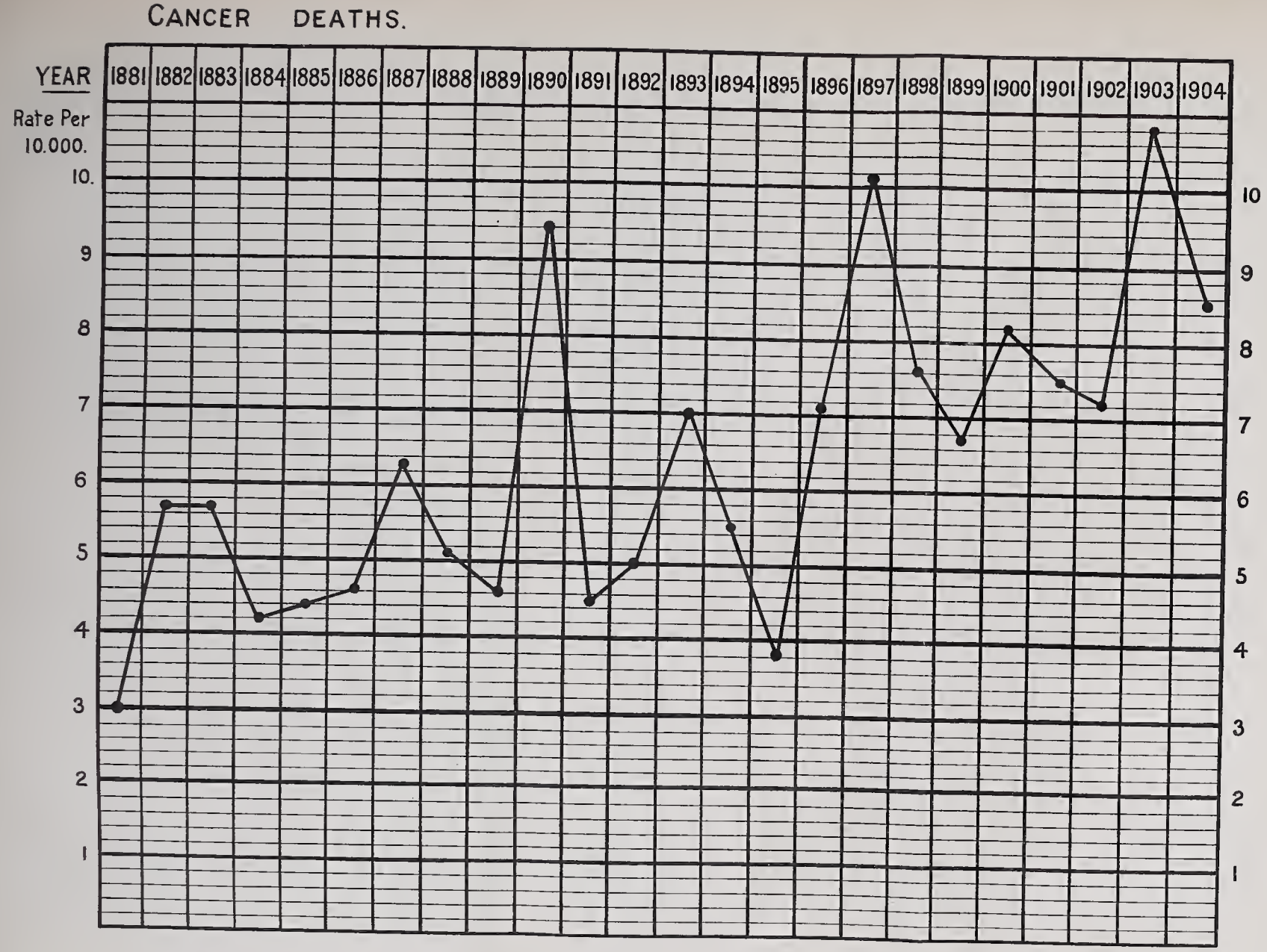

Chart showing the Cancer death rate in Burton for a series of years.

scirrhus, and epithelioma. There is a popular opinion in the borough that the town is a hot-bed of cancer. With the object of testing the truth of this and also to see if any suggestions for future action in the control of this disease would present themselves, statistics of the disease in the borough have been got out for 25 years, 1879—1904. These have been classified under sex and also according to address.

The total number of deaths from cancer in the 25 years was 763, of these 306 or 40 per cent. were of males, and 457 or 60 per cent. were of females, as compared with a proportion of 37 per cent. males and 63 per cent. females in Staffordshire, 1881—1890.

It will be well now to compare Burton with other places as to the prevalence of cancer.

In the Supplement of the 55th Annual Report of the Registrar General the mortality due to cancer in England and Wales during 1881—1890 was equal to a mean annual rate of 5·89 per 10,000 living without distinction of sex or age, but it varied widely in different parts of the country. It is there shown also, that the lowest mean cancer death-rates were recorded in the county of Durham, 4·40 per 10,000; Staffordshire, 4·75; Lancashire, 4·77; Derbyshire, 4·82; and the highest in Devonshire, 7·40; Cambridgeshire, 7·89; and Huntingdonshire, 9·16. Moreover, it is also shown that the counties which showed respectively either the highest, or the lowest, cancer rates in 1881—1890 had also been among the counties with the highest or lowest cancer-rates in the two previous decennia. The mortality in a given place is largely dependent on the proportion of persons under or over middle age in the population, since the mortality from this disease is mainly confined to persons over 35 years of age. When a correction is made for age and sex distribution it is found that the position of Staffordshire is not quite so satisfactory, although it still remains among the counties with the lowest rates, and is considerably lower than in the country as a whole.

For the 10 years under consideration, 1881—1890, the rate in Burton was 5·30 per 10,000—this being below the rate in the country as a whole, although considerably above the rate in the County of Stafford.

In the succeeding decennium the rate in the borough rose to 6·55, and in the last ten years, 1895—1904, it amounted to an average of 7·75.

I cannot give the figures for the country as a whole, or for the counties for these years, but there is nothing to show that the increase is going on at a greater rate in Burton than in the country as a whole, as the cancer rate is certainly increasing all over the country. The rate for England and Wales in 1902 was 8·44. That being so, Burton should still retain her favourable position relative to other places. Of the total of 763 deaths, only 558 could be classified according to address, as in 115 instances the address was not given with sufficient clearness for accurate classification, and in addition 71 cases died in the workhouse, and 19 in the infirmary, where no reference is made to previous addresses.

It was found that there were 18 houses in which two cases had occurred, and one house in which three cases had occurred. In almost all of these cases the patients were not of the same name, and so presumably were not of the same family.

In a special report on cancer in Ireland, the Registrar General states that he had the deaths from cancer in the City of Dublin extracted for a period of 10 years, viz., 1876—1885, with the result that in 12 cases it appears that two deaths from the disease occurred in the same house. In all these instances, except one, the persons belonged as far as could be ascertained to different families.

Returning to the Burton figures, we find that 17 cases occurred in houses where there had previously been a case next door, and 17 cases where there had previously been a case next door but one, and 29 cases where there had been a case next door but two. This shows rather a tendency to grouping, for if we now consider houses a further distance apart, taking at random houses say 10, 15, and 17 doors away, we find that there occurred 10 cases at houses 10 doors away, and 6 in houses 15 doors away, and 3 in houses 17 doors away.

In a review of the Third Annual Report on the Harvard Cancer Commission, in the *British Medical Journal*, of 19th November, 1904. it is stated that the "statistics do not tend to prove a relative increase of Cancer nor its occurrence in localities or certain houses beyond what chance will quite account for. This result corroborates that of the English Cancer Commission reported last Spring, and in general the trend of the work is the same, that is to say, towards establishing the non-infectious and metabolic nature of the disease."

While the figures given for Burton are far too small for any definite deductions to be made from them, especially if they in any way seem to contradict the finding of the Cancer Commissions, no doubt founded on a much greater mass of figures, I think it is reasonable to say that these figures show a tendency for the disease to recur in the same house or in neighbouring houses to a greater extent than chance will quite account for. Further, the figures undoubtedly prove that there is no foundation for the belief that Burton is a hotbed of Cancer, the true state of the case being that the town is less affected with this scourge than the average of the country as a whole.

PREVENTIVE MEASURES.—It is usual to disinfect the houses in the Borough where there has been a death from Cancer, on a request being received that this should be done. Several houses were thus disinfected during the year.

NOTIFICATION OF INFECTIOUS DISEASE.

Excluding chicken pox, the total number of notifications of infectious disease was 233. The year 1904 was thus a record one in so far as it showed the lowest number of cases of notifiable infectious diseases since the adoption of the Infectious Disease Notification Act in 1892.

The following table shows the number of notifications of each disease during the past 12 years, measles and chicken pox which were added to the list for certain periods being excluded from the totals—

NOTIFICATION OF ZYMOTIC DISEASES.

TABLE.

	1904	1903	1902	1901	1900	1899	1898	1897	1896	1895	1894	1893
Scarlet Fever	106	179	256	201	110	322	314	351	284	317	227	376
Small Pox ...	13	37	—	—	—	—	—	—	5	1	1	—
Diphtheria ...	46	25	53	161	414	46	55	72	156	101	56	68
Enteric Fever	8	17	10	65	24	37	25	46	34	86	59	36
Puerperal Fever	5	2	7	3	3	6	1	2	1	3	9	3
Erysipelas ...	55	26	51	66	78	77	70	79	80	78	57	60
Total	233	286	377	496	629	488	465	550	560	586	409	543
Chicken Pox	60	249										
Measles ...	—	—	1604	138	2690	25	2048	272	2453	96	1963	—

The most marked diminution is seen in the notifications of scarlet fever, only 106 cases being notified as against 179 last year. In fact this is the lowest number that has been notified of this disease, although in 1900 this number was nearly reached. As compared with last year a diminution is also shown under the heading of small pox and enteric fever. There was an increase in the number of cases of erysipelas, puerperal fever and diphtheria notified, but in the case of erysipelas and diphtheria the numbers were well below the average.

Although the Borough thus enjoyed a comparative freedom from the notifiable infectious diseases, it was otherwise with the other non-notifiable zymotics, viz., whooping cough, measles, and epidemic diarrhœa.

A very severe epidemic of whooping cough spread over the town, commencing in April and reaching its height in June, and continuing until the end of the year in scattered cases. Measles also became epidemic in the autumn, but was of a very mild type. Although it was very prevalent, only five deaths had been recorded by the end of the year.

Epidemic diarrhœa was also much more prevalent than during the preceding year, and was responsible for 21 deaths.

ZYMOTIC DEATH-RATE.—The number of deaths from the seven principal zymotic diseases (small pox, scarlet fever, enteric fever, diphtheria, whooping cough, measles, and diarrhœa) was 108, which is equal to a zymotic death-rate of 1·52.

The following table gives the number of deaths from the principal zymotic diseases for 1904 and the previous six years—

	1904	1903	1902	1901	1900	1899	1898
Diphtheria ...	6	3	5	16	68	8	11
Scarlet Fever ...	6	6	16	5	0	7	2
Epidemic Diarrhœa	21	15	6	34	36	52	50
Whooping Cough ...	41	8	9	27	13	22	2
Enteric Fever ...	0	1	0	10	3	10	3
Measles	5	4	19	2	45	0	31
Smallpox	0	1	0	0	0	0	0
Epidemic Influenza	25	4	9	1	30	25	10
Puerperal Fever ...	1	0	2	3	5	4	1
Erysipelas	3	1	1	3	6	1	2
Totals	108	43	69	101	236	129	112

The zymotic death-rate of 1·52, although much higher than last year is slightly below the average for the previous 10 years, which is 1·96, and is also below the rate in England and Wales for 1904, as shown in the following table :—

	1904	1903	1902	1901	1900	1899	1898	1897	1896	1895	1894	1893
England and Wales ...	1.94	1.46	1.64	2.05	2.0	2.21	2.22	2.15	2.18	2.14	2.25	3.16
Burton upon-Trent ...	†1.52	0.7	‡1.12	1.85	*3.09	1.88	1.93	1.78	*3.83	1.48	2.0	2.15

* Measles and Diphtheria prevalent.
† Measles and Whooping Cough prevalent.
‡ Measles prevalent.

In the following table the zymotic death-rates in a number of towns of similar size to Burton are set forth—

TOWN.	Estimated Population. 1904.	Zymotic Death-rate.
Ashton-under-Lyne ...	44,541	1·8
Aston Manor	80,363	2·9
Bath	49,800	0·90
Blackpool	54,338	1·29
Bootle	62,000	3·6
BURTON-ON-TRENT ...	51,934	1·52
Bury	58,450	2·30
Carlisle	37,350	1·3
Coventry	73,904	1·6
Cheltenham	50,500	0·99
Crewe	46,065	2·04
Hanley	63,889	4·1
Huddersfield	94,936	1·91
Ipswich	69,805	1·51
Lancaster	43,570	0·96
Leigh	43,900	2·9
Merthyr Tydfil	72,745	2·3
Newport (Mon.)	71,543	1·67
Northampton	90,340	1.5
Oxford	50,506	0·91
Swansea	98,380	1·4
Swindon	48,200	1·6
St. Helens (Lanc.) ...	88,740	3·96
Tynemouth	53,022	1·82
Wallasey	57,000	2·85
West Bromwich	67,186	1·9
Wigan	64,249	3·14
Wolverhampton	98,268	2·71
Wimbledon	47,719	1·9
Warrington	68,490	4·6
York	81,268	2·87

Chicken-pox which was made notifiable for 12 months from 1st April, 1903, was removed from the list of notifiable diseases on March 31st, 1904. During the 3 months (January to March, 1904) 60 cases were notified.

The following table shows the age distribution in the various diseases—

Notifiable Disease.	At all Ages	At Ages—Years.					
		Under 1	1 to 5	5 to 15	15 to 25	25 to 65	65 and upwards
Small-pox	13	1	—	2	1	9	—
Cholera	—	—	—	—	—	—	—
Diphtheria, Membranous Croup	46	2	22	14	4	4	—
Erysipelas	55	—	—	—	—	—	—
Scarlet Fever	106	1	35	60	8	2	—
Typhus Fever	—	—	—	—	—	—	—
Enteric Fever	8	—	—	3	2	3	—
Relapsing Fever	—	—	—	—	—	—	—
Continued Fever	—	—	—	—	—	—	—
Puerperal Fever	5	—	—	—	2	3	—
Plague	—	—	—	—	—	—	—
Totals ...	233	4	57	79	17	21	—

The following table gives the notifications in months :—

	January	February	March	April	May	June	July	August	September	October	November	December	Totals.
Enteric Fever .	0	0	1	1	1	0	0	1	1	1	1	1	8
Scarlet Fever ...	7	7	7	8	7	5	7	18	8	10	14	8	106
Diphtheria ...	4	0	10	2	6	4	5	1	3	5	3	3	46
Erysipelas ...	3	2	6	8	7	5	6	1	5	7	5	5	60
Small Pox ...	3	0	2	3	3	0	2	0	0	0	0	0	13
	17	9	26	22	24	14	20	21	17	23	23	17	233

SCARLET FEVER.—There was no special prevalence of this disease at any period of the year, nor was there any district affected with any severity. The largest number of cases were notified from the Burton, Shobnall and Winshill and Wetmore Wards.

For a considerable time during the latter half of the year the disease seemed to linger in Wetmore Road and Hawkins Lane.

An outbreak of the disease in the Workhouse, towards the end of the year, when 14 cases were notified, accounts for the large number of cases in the Shobnall Ward.

During the first part of the year there was evidence which became a certainty as time went on, that although the number of cases were few, the virulence of the disease was increasing. Towards the end of the year this became more marked, and several deaths occurred. Not only were the cases of a much worse type on admission to the hospital but complications became more frequent.

The ward at the Hospital was changed, or rather all fresh cases were put into a fresh ward, and the ward in use was gradually emptied as the patients were discharged. The ward was then disinfected. This checked the number of the complications only to a limited extent.

SCARLET FEVER.

Ward.	Cases.	Attack Rate per 1,000.	Deaths.	Case Fatality Per Cent.	Removals to Hospital Per Cent.
Shobnall	27	3·7	3	11·1	96·3
Victoria	6	0·9	0	0	83·3
Horninglow ...	8	1·2	0	0	100·
Uxbridge	12	1·6	0	0	83·3
Broadway	9	1·3	1	11·1	88·8
Burton	27	4·6	0	0	96·3
Winshill and Wetmore	15	2·4	2	13·3	93·3
Stapenhill	2	0·3	0	0	50·0
Total ...	106	2·0	6	5·6	92·4

The total number of Scarlet Fever cases during the year was 106 of which 98 or 92·4 per cent. were removed to hospital.

The highest percentage of removals was from Horninglow Ward, where all the cases were removed, and the lowest in Stapenhill, where only half the cases were treated in hospital.

DIPHTHERIA.

Ward.	Cases.	Attack rate per 1,000.	Deaths.	Case Fatality per cent.	Removal to Hospital per cent.
Shobnall ...	2	0·3	0	0	50·0
Victoria ...	3	0·5	1	33·3	0
Horninglow	4	0·6	0	0	0
Uxbridge ...	12	1·6	3	25·0	16·6
Broadway ...	9	1·3	1	11·1	0
Burton ...	11	1·8	0	0	45·4
Winshill and Wetmore...	4	0·6	1	25·0	0
Stapenhill ...	1	0·1	0	0	0
	46	0·88	6	13·0	17·4

There were 46 cases of diphtheria notified during the year, the highest number being from the Uxbridge Ward, and the lowest from Stapenhill. The highest attack rate, however, falls upon the Burton Ward, just as in scarlet fever. Seven of the cases proved fatal, giving a case fatality per cent of 15·2, which is rather a low rate.

Eight cases, mostly of a very severe type, were treated in hospital ; of these one died.

SUPPLY OF DIPHTHERIA ANTITOXIN.—Antitoxin was supplied for cases of diphtheria during the year, and the great majority of cases were injected. Syringes may also be had at the Health Offices to administer the serum. The total number of cases treated with the serum was 35, of which five died. In some of the fatal cases the serum was given too late to be of any service owing to the delay in procuring medical advice. In a few instances where the patients have been treated at home antitoxin has also been supplied for prophylactic purposes.

The total amount spent on antitoxin during the year was £9 11s. 8d. This includes the serum used at the Borough Hospital, and in my opinion the sum spent is a very small one when set against the incomparable benefit which has been derived from its use.

Apparatus for the taking of swabs from persons suspected of suffering from diphtheria can also be had at the Health Office. The swabs are sent to the Lister Institute, London, for bacteriological examination. During the year 10 swabs were reported on, with the result that in one case the diphtheria bacillus was isolated, and in 9 the result was negative.

It is a matter of regret that this procedure is not more taken advantage of, not only as an aid to diagnosis, but also as a reliable means of ascertaining when a patient is free from infection and may safely be discharged. When the throat is

clear of membrane a patient may still be infectious, and the only means of telling with any degree of certainty, when such infectious period is over is by taking a swab from the throat.

Some cases treated at home have been given their discharge within a fortnight of the initial illness, and although some cases may be free from infection in that time it is unusual to find it so.

The cases of diphtheria cropped up at irregular intervals all over the town, and few of the cases could be traced to a definite source of infection. Many cases of diphtheria are so mild that the patients are unconscious of their ailment and put it down to a slight sore throat. Such cases are the usual method of spreading this disease, and such a mild case may infect another person with a most virulent form of the disease.

SMALL POX.—Thirteen cases of small pox were notified during the year. All were removed to hospital. Six of the cases were of the tramp class and were found at the Workhouse, the Infirmary, or in Common Lodging Houses. Two of these cases gave rise to secondary cases, four in number, in contacts who were either unknown or their names concealed.

The disease was also introduced on two other occasions by persons not of the vagrant class. One of these cases gave rise to one secondary case in a woman who was not known to be a contact when the original case was removed.

It will thus be evident that the disease was introduced on eight occasions, and that no spread of the disease occurred on five of these, while five persons contracted the disease from the three remaining cases.

All the patients recovered, three being of a severe type, one moderately severe, and nine mild.

The following history, which was obtained from one of the patients, will show how the disease is spread by tramps, and the difficulties which have to be encountered in tracing the source of infection in some cases.

C—— B——, age 38 years, outdoor labourer.—Patient stated that he first noticed the rash on his face on 20th April, 1904, and that he slept that night in a Common Lodging House (near the bridge), Ashbourne. On April 21st he tramped into Derby and stayed a night at J——— B———'s Lodging House, coming on to Burton on April 22nd, and sleeping that night at a Lodging House in Patten Yard. Next morning feeling very ill he went to the Infirmary, &c.

From the above it will be seen that this man visited at least three Common Lodging Houses and the Infirmary while in a very infectious state.

ENTERIC FEVER.—Only eight cases of this disease were notified during the year, as compared with 17 last year.

Of these cases two were tramps and were not infected in Burton, and of the remaining six cases, in one instance the disease was contracted in London, in another probably in Derby, and in a third possibly at Rhyl.

One of the patients had a history of having eaten oysters about the time of infection.

Two of the cases were removed to the Hospital. There were no deaths.

Examination of the blood for Widal's re-action :—Twelve specimens of blood from suspicious cases were sent to the Lister Institute for examination. In four cases the Widal re-action was obtained, and in eight the re-action was not obtained.

ERYSIPELAS.—Fifty-five cases of this disease were notified during the year. Notification is required under the Infectious Disease Notification Act, but such a proceeding has very little effect on the prevalence of the disease.

PUERPERAL FEVER.—Five cases were notified during the year. It seems probable that the better regulation of midwives and their work under the Midwives Act will in a short time accomplish a considerable reduction in the number of cases of this disease throughout the country.

MEASLES AND WHOOPING COUGH. — Severe epidemics of both these diseases occurred during the year. Whooping cough began to be prevalent in May, and soon spread all over the town, so that practically all the schools were more or less affected. It was felt that the closure of one or two schools, or the infant departments of one or two schools, would be of little use in checking the disease, but as the summer holidays were approaching, advantage was taken of this to advise the closure of all the infant departments in the Borough ten days before the regular time of closing, this giving a total closure of nearly five weeks. When the schools re-assembled a great improvement was manifest, although the disease still lingered more or less until the end of the year. In all, 480 cases were notified by the Secretary to the Education Committee, Mr. Graham.

Measles was present to a serious extent in Wellington Street and district for nearly a month before it was known to the Health Department. As measles had previously been a notifiable disease in Burton, it had been customary for the Health Office to notify the cases to the Education Authority, but when notification ceased, the Health Department had no means of getting to know of the cases except through the Education Committee, and as no instructions had been given to the Education Authority to notify the disease, naturally they did not do so.

In consequence the disease got a thorough hold before any attempts were made to check it, and when these efforts were made they had no degree of success, as the disease ultimately spread through the whole town. The infant departments of the Victoria, Broadway, and Bond Street schools were closed for a period of three weeks. This certainly checked the spread of the disease for a time, but as before mentioned the whole Borough was ultimately affected. Epidemics of this disease have occurred in Burton with great regularity every second year for a large number of years. The total number of cases of measles notified by the Education Authority was 468, but this can only be regarded as a small proportion of the total number of cases.

SCHOOLS AND INFECTIOUS DISEASE.

The following table gives the number of notified infectious cases attending the various schools :—

School.	Measles.	Diphtheria.	Scarlatina.
Shobnall Road ...	26	—	—
Grange Street ...	30	—	8
Victoria Road ...	126	1	4
Wellington Street ...	4	—	—
Guild Street	9	7	3
Catholic School ..	3	—	1
Christ Church ...	11	—	3
Hawkins Lane ...	1	—	23
Uxbridge Street ...	68	9	7
Bond Street	25	—	—
Broadway Street ...	117	—	6
Goodman Street ...	3	2	3
Horninglow	2	—	1
Mission Room, Stapenhill ...	2	—	1
Stapenhill Boys ...	2	—	1
Wetmore Rd. Board ...	21	2	5
Hawfield Lane ...	—	—	1
Stafford Street ...	—	—	1
Berry Hedge Lane ...	—	—	1
Totals	450	21	69

Wetmore Road Board One Enteric Fever. Total cases of Whooping Cough, 480.
Total cases of Chicken Pox, 45. Measles (no School given), 18.

BACTERIOLOGICAL EXAMINATIONS.—The bacteriological examinations in connection with infectious diseases are conducted for the Corporation by the Lister Institute, London. The following is a summary of the results of the examinations :—

Disease.	Number Result positive.	Number Result negative.
Diphtheria	1	9
Enteric fever	4	8
Phthisis	1	6

The total cost of these examinations for the year was £6. 0s. 3d.

BOROUGH ISOLATION HOSPITAL.—During the year 1904 there were only 133 patients treated in the Borough Isolation Hospital as compared with 217 in the previous year. This does not imply that there was a great deal less work to do at the hospital, because in a small hospital with a very limited supply of nurses, the amount of the work for the staff depends more on the number of different diseases under treatment at the same time, than on the number of patients. There has during the year been an almost constant succession of single cases of a disease in the hospital, and this one case necessitated the same arrangements as regards nursing, etc., as if there had been a number in. For example, except on one occasion there has never been more than one case of diphtheria in at one time, and the same applies to enteric fever. Again, several cases of scarlet fever have been admitted suffering also from whooping cough, and these required isolation.

The following is a summary of the cases treated :—

Patients.	In Hospital, Jan. 1st, 1904.	Admitted.	Discharged.	Died.	In Hospital, Dec. 31, 1904.
Small pox ...	0	13	13	0	0
Scarlet fever...	11	98	86	5	18
Diphtheria ...	0	8	7	1	0
Enteric fever..	1	2	2	0	1
Totals ...	12	121	108	6	19

The ages of the patients admitted were as follows :—

Under 1 year	2
1 to 5 years	37
5 to 15 years	64
15 to 25 years	8
Over 25 years	10
Total ..	121

COMPLICATIONS.—The following complications in scarlet fever patients have been recorded as having been present either on admission or having developed during the course of the disease. Trifling complications were not recorded, and several of them may have been present in the same patient.

Otorrhœa	15
Rhinorrhœa	11
Albuminuria	2
Ulcers in Mouth or Throat	5
Adenitis	8
Whooping Cough	3
Abscess and Necrosis of Bone ...	2
Ringworm	1
Congenital Syphilis	1
Gangrenous Cellulitis	1
Acute Delirium	1

One child admitted was suffering from a severe burn of the leg.

"RETURN" CASES OF SCARLET FEVER.—The following table shows the number of cases discharged from Hospital which have apparently been the cause of 'return' cases of scarlet fever. Those in the first two columns are probably true return cases, those in the last two are very doubtful.

Within 7 days.	7 to 14 days.	14 to 21 days.	Over 21 days.
3	3	2	2

HOSPITAL EXPENDITURE.—The following table shows the hospital expenditure during the financial year ending March 31st, 1904.

	£	s.	d.
Men's wages and team work	270	1	11
Matron's, Nurses', and Servants' wages and clothing	277	13	9
Provisions	310	7	5
Gas, water, and fuel	189	4	11
Rates, taxes, and Insurance	96	11	3
Repairs, painting, etc.	146	9	7
Furnishing, ironmongery, chandlery, etc. ...	67	13	0
Medical requisites, disinfectants, etc. ...	26	3	10
Keep of horse	43	7	10
Plants, seeds, etc.	14	13	9
Miscellaneous	49	8	4
Total	£1,491	15	7
Less income	43	4	0
Nett expenditure on maintenance	£1,448	11	7

VACCINATION.—The following table is compiled from information kindly supplied to me by Mr. C. F. Chamberlin, Clerk to the Guardians. The figures relate to the whole of the Burton district, the facts for the Borough not being available separately :—

VACCINATION RETURNS.

	Jan. 1st to June 30th, 1904.	1903	1902	1901.	1900.	1899.	1898.	1897.	1896.	1895.
Births Registered	734	1,489	1,493	1,527	1,566	1,569	1,600	1,408	1,500	1,563
Successfully Vaccinated	547	1,179	1,142	1,039	733	806	526	516	604	638
Insusceptible ...	0	2	3	0	1	6	0	0	0	3
Dead Unvaccinated	61	113	117	128	175	187	203	157	185	184
Exempted through "Conscientious Objection" ...	19	37	33	37	35	34	18	6	—	—
Postponed by Medical Certificate ...	15	1	4	3	—	0	0	1	3	0
Left District and reported elsewhere	4	5	12	16	13	15	16	15	14	32
Lost sight of ...	35	53	45	56	49	49	33	34	89	170
Unaccounted for ...	53	99	137	248	560	472	804	677	605	536
Percentage Vaccinated	74	79	76	68	54	51·3	32·8	36·6	40·2	40·8

MILK SUPPLY.

A very important addition was made during the year to the measures in force for the protection of the Milk Supply. Part VIII. of the Burton-upon-Trent Corporation Act, 1901, which deals with the important subject of tuberculous milk was put in force. A handbill of the provisions of the Act was drawn up, and a copy of this, along with a circular letter of explanation, was sent to every farmer known to be supplying milk within the borough. It was also arranged that two samples of milk be taken every week and sent to Professor Delépine, Manchester, to be examined for tuberculosis.

This arrangement has been carried out except that for a short period during the summer, Professor Delépine was unable to receive samples.

In all, 41 samples were examined during the year. Of these six were found to cause tuberculosis, and 35 not to cause tuberculosis. Of the six positive samples, two were from one farm, the samples being taken at an interval of seven months. This showed a bad state of affairs. With this one exception the milk from the other four farms has again been examined and found to be good. The first sample was taken on the 17th of February, and it is a matter for congratulation that with the exception of the second sample from the farm above mentioned, no sample has been found to be tuberculous since the 29th March, 1904.

On the whole the farmers have met the efforts of the Health Committee in the most public spirited manner, and have given the officials every assistance in their power. It was found necessary to prosecute one farmer for obstruction : he was fined £2, and £1 9s. 6d. costs, but in other instances no difficulty was encountered.

There cannot be the slightest doubt that the precautions taken under this act to protect the milk supply are of the most vital importance, especially to that portion of the community mostly depending on it, viz., infants and invalids.

In this connection, samples of the milk supplied to the Borough Isolation Hospital, the Workhouse, and the Burton Infirmary have all been submitted to Professor Delépine who certified all these to be free from tuberculous germs.

The cleanliness of the milk supply is also a matter of great importance. The prevalence of summer or zymotic diarrhœa, is due in a large measure to dirty milk. The milk supply of Burton is peculiar in that in a large number of instances the local milk-sellers meet the country carts at certain places outside the borough. There the milk changes hands, and is taken direct to the milk rounds without being taken to a milk store, or milk shop. Indeed very little milk is sold in Burton in milk shops. In my opinion the above

arrangement is advantageous, in that fewer opportunities are given for infection of the milk with dust or dirt. No powers exist for enforcing cleanliness in milk produced outside the Borough. The best means for obtaining a clean milk supply are to enforce the cleanliness of cows, and cowsheds, washing of the milkers' hands, and cleanliness in all utensils generally. All the cowsheds within the borough are inspected at intervals with regard to cleanliness and other matters, and on the whole although there is undoubtedly room for improvement, the condition of the cows within the borough is fairly satisfactory.

Within the borough there are 59 registered cowkeepers, and 260 visits of inspection have been paid to these during the year.

In addition to these, 135 visits have been paid to dairies and milkshops.

SALE OF FOOD AND DRUGS ACTS.

The following table shows the number of samples taken during the year, and the number of those found to be adulterated—

Nature of Article.	No. of Samples taken.	No. Genuine.	No. Adulterated.
Brandy	4	4	0
Whisky	4	4	0
Gin	2	2	0
Rum	2	2	0
Milk	46	46	0
Separated Milk ...	1	1	0
Arrowroot	2	2	0
Pepper	5	5	0
Coffee	10	10	0
Mustard	4	4	0
Butter	9	8	1
Margarine	2	2	0
Chicory	1	1	0
Tea	2	2	0
Totals ...	94	93	1

Four samples of milk were found to be very poor, but as they were not under the standard fixed by the Board of Agriculture, no action could be taken, although there were certainly grounds for suspicion against them.

WATER SUPPLY.—The public water supply of the Borough is that of the South Staffordshire Water Works Co.' chiefly obtained from tubes in the gravel bed at Fradley. This water is of great purity organically, and although a very hard one is very good for drinking purposes. A large number of the houses still depend on private shallow wells for their water supply. A large number of these wells are more or less polluted, the chief reason of this being that they are in close proximity to defective drains, privies, manure heaps, etc., and that the sub-soil is very porous. A sample of water from a well is always submitted to analysis on a complaint being received, or defective drains or privies found near the well, or on the occurrence of a case of typhoid fever.

Samples of the public water supply have been analysed on several occasions during the year, and have always been found to be satisfactory.

Sixteen samples of well water were submitted to analysis during the year, of these eleven were condemned as unfit for domestic use.

It should be pointed out that although a water be found to be polluted and rightly condemned, it may have given rise to no actual illness in the persons using it, but this fact is due to the absence of any specific germs in the polluted water and these may gain access at any time. It will be well to quote Dr. Millard on this subject in a former report.

"It should be clearly understood that well water may be dangerously polluted and yet be bright, clear, and palatable. Indeed this is frequently the case. As a consequence of this, the actual consumers of the water may be quite satisfied and

even praise it. Often too, when the quality of the water is impugned, they state that they have drank it for many years and experienced no bad effects. This is quite explicable, for it is well known that a water may be dangerously polluted and yet be productive of no apparent injury to health.

"It is just here, where the difference between **danger** and **injury** to health comes in, and it is the duty of a Sanitary Authority to guard against a danger without waiting for actual injury. That polluted water is dangerous is too well recognised to require insistance upon."

FACTORY & WORKSHOPS ACT, 1901.

The following is a list of the various workshops in the Borough:—

Plumbers	7	Rope Makers ...	1
Boot Trade	28	Cycle Makers ...	8
Bottlers	3	Brush Makers ...	1
Smiths	14	Picture Framers ...	2
Bakehouses	41	Jewellers	4
Lace	1	Tin Workers ...	5
Tailors	36	Joiners	9
Cabinet Makers and Upholsterers ...	9	Clog Makers ...	2
Coach Builders ...	3	Stone Masons ...	2
Saddlers	7	Confectioners ...	3
Corset Makers ...	1	Wheelwrights ...	4
Screen Makers (Wireworkers) ...	2	Millinery and Dressmaking ...	47
Coopers	4	Hosiery	1

The total number therefore is 245 as compared with 252 last year, and 254 the previous year.

The general condition of the premises where these trades are carried on may be stated to be satisfactory. In 13 instances (eight workshops and five bakehouses) a want of cleanliness was observed, but the limewashing was instantly complied with when the defect was pointed out.

One case of infectious disease was notified in home-worker's premises during the year.

UNDERGROUND BAKEHOUSES.—There are no underground bakehouses in the Borough.

LISTS OF OUTWORKERS.—Lists of outworkers to the number of 179 have been received during the year at the proper periods, and five addresses of outworkers have been forwarded to other authorities.

INSPECTIONS.—The total number of inspections made during the year was 447. The inspections made of home-workers' premises have not been recorded, but arrangements have now been made to carry this out.

COMMON LODGING HOUSES.—There are ten Common Lodging Houses registered in the Borough to accommodate 158 persons. These were fully reported on by the Medical Officer in his Annual Report for 1902. All these houses are visited regularly by the Sanitary Inspectors as is shown by the fact that 535 visits were paid to these houses during the year.

MIDWIVES ACT.

Under section 2 of the Midwives Act, 1902, it is provided that "any woman who, within two years from the date of this Act coming into operation, claims to be certified under this Act, shall be so certified provided she holds a certificate in midwifery from the Royal College of Physicians of Ireland, or from the Obstetrical Society of London, or the Coombe Lying-in Hospital and Guinness's Dispensary, or the Rotunda Hospital for the Relief of the Poor Lying-in Women

of Dublin, or such other certificate as may be approved by the Central Midwives Board, or produces evidence, satisfactory to the Board, that at the passing of this Act she had been for at least one year in *bona fide* practice as a midwife, and that she bears a good character."

Hence all existing midwives wishing to be registered must put in a claim for registration before 1st April, 1905. After this date, no woman unless certified under this Act can take or use the name or title of midwife, or any name, title, addition or description implying that she is certified under this Act, or is a person specially qualified to practise midwifery, or is recognised by law as a Midwife. (Section 1., Sub-section 1.)

Due notice of the effect of the Act so far as practicable was given both by advertisement in the local papers, and also by a circular-letter sent to all known midwives. As this did not seem to awaken some of the midwives to the importance of registration, the Sanitary Inspectors called on all those who had not been registered, and explained to them the importance of this step.

Up to the 31st December, 1904, 27 midwives had obtained the certificate of registration.

The duties of a Council under the Act as set forth in Section 8 are as follows :—

"Every Council of a County or County Borough throughout England and Wales shall, on the commencement of this Act, be the local supervising authority over midwives within the area of the said County or County Borough. It shall be the duty of the local supervising authority—

1—To exercise general supervision over all midwives practising within their area in accordance with the rules to be laid down under this Act.

2—To investigate charges of malpractice, negligence, or misconduct on the part of any midwife practising within their area, and should a *prima facie* case be established, to report the same to the Central Midwives Board.

3—To suspend any midwife from practice, in accordance with the rules under this Act, if such suspension appears necessary in order to prevent the spread of infection.

4—To report at once to the said Board the name of any midwife practising in their area convicted of an offence.

5—During the month of January of each year to supply the secretary of the Central Midwives Board with the names and addresses of all midwives who, during the preceding year, have notified their intention to practise within their area, and to keep a current copy of the roll of midwives, accessible at all reasonable times for public inspection.

6—To report at once to the Central Midwives Board the death of any midwife, or any change in the name or address of any midwife within their area, so that the necessary alterations may be made in the roll.

7—To give due notice of the effect of the Act, so far as practicable, to persons at present using the title of midwife."

The Council as the local supervising authority delegated the powers and duties imposed upon them in pursuance of this Act to the Health Committee, and the Medical Officer of Health was appointed to administer the Act.

All the registered midwives in the Borough have been visited, and inspections made of their residences, bags of appliances, case-books, etc. The various portions of the Act

as it affected their practice were also explained to them. Many defects, especially as to cleanliness, were found and remedied. A large number of them had no appliances, but promised to get the necessary ones as soon as they could afford the expense. The great majority of them were found to be very willing to learn, and to do their best to carry out all the provisions of the regulations of the Central Midwives Board.

I have no doubt that this Act will prove of immense benefit to the class of women usually attended by midwives.

EFFLUVIUM NUISANCES. — Numerous complaints have been received with reference to nuisances alleged to be caused by certain processes whereby the waste products from the breweries are converted into marketable commodities of the nature of food substances, or manures. Nuisances in connection with the roasting of malt have also been dealt with. There are in all, 7 places about which complaints have been received. All of these have been investigated, and undoubtedly from personal observation there are grounds of complaint against at least 4 of these places. Much time has been occupied by the Medical Officer of Health and Sanitary Inspectors in taking numerous observations on the various works. Proceedings were taken under section 114 of the Public Health Act, against one company engaged in drying brewers' grains in October, 1903, and after various adjournments the case was heard on 22nd July, 1904, when a conviction was obtained and a fine of £5 imposed.

In the case of the malt roasting works the proprietor is carrying out extensive improvements, which, when completed will in all probability abate the nuisance complained of.

In the remaining two, a nuisance has been observed occasionally. Efforts are being made to have this abated.

INSPECTION OF MEAT.—There are in the Borough 18 registered Slaughterhouses. Owing to the number of these and the fact that the slaughter of the animals is carried out at no definite time, the thorough inspection of meat is a matter of some difficulty. It is, however, carried out as efficiently as possible under the circumstances. One carcase of a pig was surrendered during the year, and after inspection by the Medical Officer of Health it was found to be badly affected with tuberculosis and was condemned as being unfit for human food.

The Local Government Board issued a circular during the year with the object of bringing the seizure of meat by the various authorities on to a uniform basis. The following are the instructions issued by the Board—

"It appears to the Board to be most desirable that there should be uniformity in the practice of Meat Inspectors in dealing with the carcases of cattle; and they have already on two occasions, viz., in their circular-letters of the 11th March, 1899, and 6th September, 1901, set out, and urged the observance of, the principles laid down by the Royal Commission on Tuberculosis in their report of 1898 with respect to the degree of tubercular disease which should cause a carcase or part thereof to be seized."

The Royal Commission stated as follows :—

a—When there is miliary tuberculosis of both lungs.

b.—When tuberculous lesions are present on the pleura and peritoneum.

c.—When tuberculous lesions are present in the muscular system, or in the lymphatic glands embedded in or between the muscles.

The entire carcase and all the organs may be seized.

d.—When tuberculous lesions exist in any part of an emaciated carcase.

a.—When the lesions are confined to the lungs and the thoracic lymphatic glands.

b.—When the lesions are confined to the liver.

c.—When the lesions are confined to the pharyngeal lymphatic glands.

d.—When the lesions are confined to any combination of the foregoing but are collectively small in extent.

The carcase if otherwise healthy shall not be condemned, but every part of it containing tuberculous lesions shall be seized.

"The Select Committee express their view that if a butcher who is in possession of tuberculous meat has notified the fact to the proper authority as soon as he could be reasonably expected to be aware of it, the case should not be taken into Court."

These instructions had already been followed in the Borough as they were recommended by the Royal Commission on Tuberculosis in their report in 1898.

CONVERSION OF PRIVY MIDDENS AND PAN CLOSETS INTO WATER CLOSETS.

A most important improvement in the sanitary condition of the town which is being gradually carried out, is the conversion of privy middens and pan closets into water closets. Powers for this are provided under section 96 of the Burton-upon-Trent Corporation Act, 1901, and here also power is given to the Corporation to contribute towards the cost of such conversion.

The work was first commenced in January, 1902, and from that date to 31st December, 1904, 237 applications to provide 685 water closets in place of 214 privies, and 404 pan closets had been received, and the total sum recommended to be contributed by the Corporation amounted to £3,810 7s.6d.

Up to 31st December, 1904, a total of 491 water closets had been provided.

The Corporation contribute towards the expense of these conversions in the proportion of 80 per cent. of the cost of converting existing closets, and 50 per cent. of additional closets.

It is to be hoped that this most important sanitary improvement will be continued in the future at a greater rate if possible, as in my opinion, it will greatly contribute to the increased health and well being of the inhabitants, especially in the poorer districts.

TABLE I.

BURTON-UPON-TRENT.

Vital Statistics of Whole District during 1904 and previous years.

Year.	Population estimated to Middle of each Year.	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-residents Registered in Public Institutions in the District.	Deaths of Residents Registered in Public Institutions beyond the District.	Nett Deaths at all Ages belonging to the District.	
				Under 1 Year of Age.		At all Ages.						
		Number	*Rate.	Number.	Rate per 1,000 Births Registered.	Number.	*Rate.				Number.	*Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1894.....	46,994	1,533	32·6	201	131	756	16·09					
1895.....	47,353	1,572	33·1	211	134	893	18·01					
1896.....	17,752	1,512	31·6	205	135	854	17·88					
1897.....	18,197	1,439	29·7	191	133	758	15·73	105	39	6	725	15·04
1898.....	48,694	1,463	30·0	209	142	765	15·70	111	37	3	731	15·01
1899.....	49,245	1,429	29·0	191	134	815	16·54	130	50	7	772	15·69
1900.....	49,870	1,390	27·8	199	143	971	19·19	163	44	0	927	18·59
1901.....	50,628	1,385	27·3	148	106	742	14·67	119	44	5	703	13·88
1902.....	50,973	1,365	26·7	155	113	705	13·83	129	45	12	672	13·18
1903.....	51,450	1,366	26·5	121	89	653	12·69	128	47	9	615	11·89
Averages for years 1894-1903	49,115	1,444	29·4	183	126	791	16·06	126	43	6	735	14.75
1904.....	51,934	1,351	26·0	160	118	815	15·69	166	12	9	782	15·05

* Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population.

TABLE II.

BURTON-UPON-TRENT.

Vital Statistics of separate Localities in 1904 and previous years

NAMES OF LOCALITIES	The whole District.				Shobnall.				Victoria.				Horninglow.				Uxbridge.				Broadway.				Burton.				Winshill and Wetmore.				Stapenhill.			
YEAR.	Population estimated to middle of each year.	Births Registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births Registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births Registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births Registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births Registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births Registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year	Births Registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births Registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births Registered.	Deaths at all Ages.	Deaths under 1 year.
1894.....	46 994	1,533	756	201																																
1895	47,353	1,572	893	211																																
1896.....	47.752	1,512	854	205																																
1897	48.197	1,430	725	191																																
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1900.....	49.870	1.390	927	199																																
1901.....	50.628	1.385	703	148																																
1902	50.973	1,365	672	155	7,211	182	64	16	6,171	165	84	24	6,245	198	88	19	7.176	184	121	27	6,801	171	73	15	5,818	151	99	23	6,093	136	64	16	5,458	178	79	15
1903.....	51.450	1.366	615	121	7,247	165	79	13	6,346	175	75	17	6,309	210	90	22	7,263	197	94	20	6,821	177	66	14	5,827	133	82	15	6,129	136	55	9	5,508	173	74	11
Averages of years 1894-1903	49.115	1.444	764	183																																
1904.....	51.934	1,354	782	160	7,240	178	146	30	6,475	174	96	20	6.466	185	85	21	7.402	198	110	24	6,805	195	93	16	5,820	119	113	19	6,122	127	72	13	5,604	178	67	17

By the Burton-upon-Trent Corporation Act, 1901, which came into operation on 26th July, 1901, the Borough was re-divided into 8 Wards, in place of the previously existing 5 Wards.

TABLE III.

BURTON=UPON=TRENT.

Cases of Infectious Disease notified during the Year 1904.

Notifiable Disease.	Cases Notified in Whole District.							Total Cases Notified in each Locality.								No. of Cases removed to Hospital from each Locality.							
	At all Ages.	At Ages.—Years.						Shobnall.	Victoria.	Horninglow.	Uxbridge.	Broadway.	Burton.	Winshill and Wetmoor.	Stapenhill.	Shobnall.	Victoria.	Horninglow	Uxbridge.	Broadway.	Burton.	Winshill and Wetmoor.	Stapenhill.
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65	65 and upwards.																
Smallpox ..	13	1	0	2	1	9	0	*6	0	0	2	1	4	0	0	*6	0	0	2	1	1		
Cholera	0																						
Diphtheria	46	2	22	14	4	4	0	2	3	4	12	9	11	4	1	1	0	0	2	0	5		
Memb. Croup																							
Erysipelas ..	55	...	...	...	...	...	...	4	12	7	9	4	4	8	7								
Scarlet Fever ..	106	1	35	60	8	2	0	27	6	8	12	9	27	15	2	26	5	8	10	8	26	14	1
Typhus Fever ...	0																						
Enteric Fever ...	8	0	0	3	2	3	0	3	0	2	1	0	1	1	0	0	0	1	1				
Relapsing Fever	0																						
Continued Fever	0																						
Puerperal Fever	5	...	...	...	2	3	...	...	2	...	...	1	...	1	1								
Plague																							
Chicken Pox ..	†60																						
Totals ...	293	4	57	79	17	21	0	42	23	21	36	24	47	29	11	33	5	9	15	9	35	14	1

* Tramps. † Notification ceased March 31st.

TABLE IV.

Schedule A.

COUNTY BOROUGH OF BURTON-UPON-TRENT.

DEATHS REGISTERED FROM ALL CAUSES DURING THE YEAR 1904.

Causes of Death.	Deaths in or belonging to whole Districts at subjoined Ages.							Deaths in or belonging to Localities (of all Ages).								Deaths of Outsiders.	Total Deaths in Public Institutions in the District
	All ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Shdb.	Vict.	H'low.	Usb.	B'way.	Burton.	Wins. and Wet.	Stapen.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Smallpox	...	...	...	...	...	...	...	..	...	...	...	...	.	...	..	...	...
Measles	5	1	3	1	...	...	...	...	...	...	...	2	2	1	...	...	...
Scarlet Fever	6	...	4	2	...	..	...	3	...	...	...	1	...	2	...	...	...
Whooping Cough	41	25	15	1	..	...	...	10	5	9	2	3	6	1	5	...	...
Diphtheria and Membranous Croup	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...
	7	2	4	1	...	...	...	...	1	...	3	1	...	2	...	...	...
Croup	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...
Fever (Typhus)	...	...	...	...	...	.	...	...	...	...	...	...	...	...	...	...	...
Fever (Enteric)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic Influenza	25	6	...	2	.	10	7	7	6	5	1	2	1	2	1	...	1
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.
Diarrhœa	21	11	4	1	...	1	4	6	4	3	3	2	...	3	...	..	1
Enteritis and Gastritis	11	6	1	...	...	2	2	1	2	3	2	1	...	1	1	2	3
Puerperal Fever	1	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...
Erysipelas	3	1	...	...	...	...	2	...	...	...	...	...	1	2	..	...	...
Other Septic Diseases	...	...		...	...	...	.	.			...	..	...	...	...	...	
Phthisis	76	...	1	8	13	51	3	16	12	6	12	9	9	3	9	3	20
Other Tubercular Diseases	...	...	...	...	...	...	...	...			...	...	...	...	...	...	...
	19	3	6	2	2	6	...	3	3	2	3	1	3	3	1	1	6
Cancer, Malignant Disease	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	44	...	1	...	1	29	13	11	3	3	7	7	6	4	3	...	4
Bronchitis	69	14	11	1	...	19	24	8	10	5	12	7	16	7	4	1	12
Pneumonia	47	11	11	2	2	17	4	7	4	9	8	8	4	...	7	1	8
Pleurisy	3	...	...	...	...	3	...	...	...	1	...	...	...	1	1	1	1
Other Diseases of Respiratory Organs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	7	...	...	...	...	6	1	...	2	2	...	1	...	2	...	...	...
Alcoholism / Cirrhosis of Liver	17	...	...	...	...	16	1	5	1	1	2	1	5	2	...	...	3
Venereal Diseases	6	1	...	...	1	3	1	1	1	...	...	...	4	...	...	...	6
Marasmus and Premature Birth	49	48	1	...	...	...	...	9	7	2	9	6	6	5	5	1	6
Diseases and Accidents of Parturition	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...
	4	1	...	..	1	2	...	...	...	2	1	...	.	1	...	...	...
Heart Diseases	69	...	...	1	2	42	24	16	7	6	12	5	15	4	4	4	15
Accidents	25	6	6	...	2	6	5	1	4	2	4	3	6	2	3	3	14
Suicides	4	...	...	...	...	3	1	1	...	...	..	1	...	1	1	1	1
Hemiplegia & Apoplexy	14	...	...	...	...	5	9	3		3	2	2	2	1	1	3	4
Old Age	47	...	...	...	...	2	45	8	7	3	5	6	6	7	5	7	19
Convulsions	11	9	2	...	...	...	...	4	2	3	1	1	...	...	...	...	1
Brights Disease	23	...	...	1	1	15	6	2	1	2	5	2	5	4	2	2	4
Not Certified	9	3	1	...	1	2	2	1	1	...	1	3	1	1	1		..
All other causes	119	12	10	10	9	50	28	23	12	13	15	18	15	10	13	12	37
All causes	782	160	81	33	35	291	182	146	96	85	110	93	113	72	67	42	166

Annual Report of Medical Officer of Health for 1904,

FOR THE

County Borough of Burton-upon-Trent.

FACTORIES, WORKSHOPS, LAUNDRIES, WORKPLACES AND HOMEWORK.

1.—INSPECTION.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises	Number of		
	Inspections	Written Notices	Prosecutions
Factories ... ... (including Factory Laundries)	18	—	—
Workshops ... ... (including Workshop Laundries)	429	—	—
Workplaces	—	—	—
Homeworkers' Premises	Has not been recorded.		
Total	—	—	—

2.—DEFECTS FOUND.

Particulars	Number of Defects			Number of Prosecutions
	Found	Remedied	Referred to H.M. Inspectr	
Nuisances under the Public Health Acts :—				
Want of Cleanliness	13	13	—	—

3.—OTHER MATTERS.

Class	Number
	Wearing Apparel
Homework in Unwholesome or Infected Premises :—	
Cases of Infectious Disease notified in Homeworkers' Premises	1

Report of Sanitary Inspector.

TOWN HALL,
BURTON-UPON-TRENT,
January, 1905.

TO THE CHAIRMAN AND MEMBERS OF THE HEALTH COMMITTEE.

GENTLEMEN,

I beg to lay before you my Annual Report and Summary of the work done in my Department during the past year.

WORKSHOPS. — There are at the present time 245 Workshops in the Borough (including those Bakehouses which do not come under the heading of Factories), as against 252 last year, and 254 the previous year. During the year I have had to require the limewashing of eight workshops and five bakehouses; this requirement has been at once complied with. With these exceptions all have been in a satisfactory condition.

List of Trades carried on in the workshops—

Plumbers	7	Boot Trade	28
Bottlers	3	Smiths	14
Bakehouses	41	Lace	1
Tailors	36	Cabinet Makers and Upholsterers ...	9
Coach Builders ...	3	Saddlers	7
Corset Makers ...	1	Screen Makers (Wire workers)	2
Coopers	4	Rope Makers ...	1
Cycle Makers ...	8	Brush Makers ...	1
Picture Framers ...	2	Jewellers	4
Tin Workers ...	5	Joiners	9
Clog Makers ...	2	Stonemasons ...	2
Confectioners ...	3	Wheelwrights ...	4
Millinery and Dress-making	47	Hosiery	1

FOOD AND DRUGS ACTS.—Under these Acts 94 samples of Food and Drugs have been taken by me and handed to the Public Analyst, who has reported to you thereon.

There are at the present time 10 Common Lodging Houses to accommodate 158 persons, 48 Slaughterhouses, 47 Bakehouses, and there are also 112 Milksellers of whom 57 are Cowkeepers.

CATTLE DISEASE.—During the past year there have been 51 cases of suspected Swine Fever reported, of these only 17 were found to be Swine Fever, no case having occurred since July 10th. These cases have necessitated 527 Notices being served. There have also been two outbreaks of Sheep Scab and one of Glanders, but at the present time the Borough is quite clear of Cattle Disease. Three stray dogs were seized during the year and afterwards destroyed.

During the year 41 samples of milk have been taken by me for bacteriological examination. This has necessarily entailed a considerable amount of extra work, as the farmers have to be met in most cases at the Borough boundary, at times varying from 6 to 9 in the morning so as to enable me to send the same to Manchester by an early train. The results of these tests have already been reported to you by the Medical Officer of Health.

Persons summoned under Public Health Act, four. Fines, £9 ; Costs, £4 5s.

Persons summoned under the Diseases of Animals Acts, 18. Fines, £1 9s. Costs, £8 4s. 10d.

Your obedient Servant,

WM. READING,

Inspector of Nuisances.

Foul and defective Ashpits filled up	24
Defective Ashpits repaired...	8
Defective Privies repaired	25
Defective Privies converted to Pan System	3
Foul and defective Privies converted to W.C.'s... ...	47
Pan Privies converted to W.C.'s	6
Water Closets repaired	12
Yard Drains trapped	67
Yard Drains cleansed from obstruction or repaired ...	81
Defective Drains reconstructed	43
Spout Drains repaired	49
Urinals repaired	2
Accumulations of Manure and offensive matter removed	19
Nuisances from Swine (removed)	3
Nuisances from Swine (abated)	12
Houses cleansed	24
Workshops limewashed	8
Bakehouses limewashed	5
Houses repaired	20
Houses closed by owners after notice had been given to put the same in a proper state of repair ...	16
Filthy premises cleansed	12
Yards paved or repaired	31
Cases of overcrowding dealt with...	4
Water supplied	4
Miscellaneous nuisances abated	7
Preliminary notices issued...	321
Statutory notices issued	42
Visits to workshops	429
„ slaughterhouses	579
„ cowsheds and milkshops	395
„ bakehouses	212
„ common lodging houses	535

Report of Superintendent of Night Soil Department.

NIGHT SOIL AND DESTRUCTOR DEPT.,
BURTON-UPON-TRENT,
March, 1905.

TO THE CHAIRMAN AND MEMBERS OF THE HEALTH COMMITTEE.

GENTLEMEN,

Annual Report, 1904-5.

I beg to present my Annual Report, showing the work done during the past 12 months, and the present condition of this Department.

NIGHT SOIL AND ASHES.—The number of men employed is exactly same as last year, viz., 59.

Additional hands are put on temporarily for pan tarring and other extra work that crops up, but this is now a very small matter compared with previous years.

The sick and allowance pay for the year amounts to £42 5s. compared with £77 18s. 5d. the previous year. One or two slight accidents have occurred, but nothing of a serious nature, which contrasts favourably with last year; and this accounts for the amount being much less.

T. Smith continues to receive an allowance of 5/- per week, granted to him in September, 1902.

31 horses are engaged in the whole of the carting, &c.

The Veterinary Surgeon's account for the year amounts to £27 actually (approximately shown £30,) the cost being practically the same as last year—the horses have had very good health—one serious case of lameness being the biggest item.

Three fresh horses have been purchased during the year and they are a very promising lot, being both quiet and good workers. One of them has had a very severe attack of influenza lasting three weeks. As, however, all fresh horses are now put straight into the isolation stable, and not allowed to go into the general stables until I am satisfied that they are in good health, the complaint has been confined to the one horse only. If we had been unable to isolate the horse on arrival, the circumstances might have proved very different. Hence the value of the new isolation stable.

It is proposed to purchase 3 horses during the ensuing year.

55 vehicles are engaged in the various branches of the work, and it is very satisfactory to note that the repairs to same have been carried out in a creditable manner.

The estimated cost of working the department and maintenance of plant, as sanctioned by the Council, was £6,645. The approximate cost is £6,379 11s. 6d. A saving of £265 has therefore apparently been effected, and is chiefly accounted for as follows, viz.—LABOUR AND TEAM WORK.—£80 less (as stated previously, our horses have had good health, consequently there has been very little hired team work). HORSES AND ACCOUTREMENTS.—£39 less (4 horses were allowed for in the estimate, but only 3 have been purchased). OILS, &c., FROM STORES.—£50 less (2 lamps have been provided for all vehicles, and the cost of oil and repairs has not proved so expensive as anticipated). REPAIRS TO BUILDINGS, &c., £20 less. WHEELWRIGHTS, &c., £46 less.

I need hardly say I feel confident that the Committee will consider the present year's working as being satisfactory.

Great care has been exercised to keep the expenditure within bounds, while at the same time the efficient working of the Department and also the maintenance of plant have been fully maintained.

The estimate for the ensuing year is £6,400, which is £245 less than last year.

As stated last month in my report on estimates and expenditure, I have looked very carefully into this matter, and much of course depends on the rate at which pan closets and privies are converted to water closets, whether we can carry out the work as per estimate.

I may here add that at the present rate of alterations there is practically no decrease of work, as a greater number of new houses have been erected than old houses converted to water closets, which means that as the men are taken from one class of work they are put on another.

From November, 1900 (when the conversions first commenced) up to March 1st, 1905, I find that 470 pan closets have been converted; while 98 additional pan closets have been put on the list for emptying purposes—this leaves a nett gain of 372 closet pans not to be emptied.

214 privies and cesspools have also been converted, which makes the nett total altogether of 586 houses where night soil collection has been cancelled.

During the same period 910 additional ashpans have been put in use at new houses, from which the refuse has to be removed weekly, and this is the work the men are put to in place of night soil collection that has been cancelled.

It should be borne in mind that if the conversions had not taken place the expenditure would have been increased to meet the cost of collecting refuse from the 910 new houses. The conversions have therefore enabled us to carry

out this work without any extra cost for collecting house refuse from new houses. Thus it is plain that unless the conversions take place at a faster rate than new houses are erected there is no decrease in the work of this department.

In other words, if no houses had been erected since November, 1900 (when the water closet system commenced) the conversions that have taken place would have enabled us to carry out the work with three men and two horses less than at present.

The work done during the year is as follows :—

		The number of				
Dry ashpits	emptied...	1,082	...	increase	...	90
Cesspools	„ ...	155	...	„	..	9
Combined closets	„ ...	1,515	...	„	...	88
Ashpans	„ ...	333,908	...	„	...	8,424
Sanitary-pans	„ ...	364,837	...	decrease	...	5,252

In my annual report of last year I stated that the work as regards pits was not in such a forward state as the previous year owing to the continuous wet weather, this work had to be caught up—hence the increase—which should really be a decrease under normal conditions.

The following is a list of the alterations and additions respecting combined closets, sanitary-pans, ashpans, etc., during the year :—

202 pan closets, 40 combined closets, and 6 cesspools have been converted to the W.C. system.

Three sanitary-pans have been put in use, two in place of privies at Old Winshill, and one additional at Horninglow Road North.

161 ashpans for old houses in place of combined closets and ashpits.

162 ashpans for new houses.

The conversions are carried out the same as last year, *i.e.*, in oddments all over the Borough, and this makes it very difficult to deal with them to the best advantage.

I would suggest that the Borough Surveyor, when stating the amount expended on the W.C. system in his monthly report, should give the cost of converting the actual pan closets and privies separate from additional accommodation, as the latter is costing a good amount without being any advantage as regards the working of this Department.

All country depôts of any note at Winshill, Stapenhill, and Horninglow are now rented, consequently they are on a more satisfactory basis than formerly. The amount of excreta, and wet and dry ashes deposited weekly is about the same as last year, viz., 35 loads excreta and 24 loads of ashes.

The total quantity of manure disposed of by trucks from the Gas Sidings Depôt is 1,048 tons, compared with 1,074 tons last year.

As per instructions, I have arranged on the same terms as last year with Mr. Haywood, of Wetmoor Farm, for the disposal of night soil on his land during the coming summer.

DESTRUCTOR.—The number of men employed is exactly the same as last year, viz., 12.

Sick pay amounts to £4 19s., compared with £5 0s. 6d. the previous year.

The approximate weight of refuse dealt with at the Destructor is 10,450 tons, an increase of 150 tons on the year, which, as before stated, is partly attributable to the work being in a backward state at this time last year.

For several weeks just recently I have disposed of about 25 to 30 tons of the best of the clinker at 2s. per ton to the Derby Coal Co., Ltd., and it has been consigned to Spondon Station and used, I believe, by Derby Corporation for filtering purposes. They have, however, now cancelled the order.

The whole of the clinker is therefore being deposited either at Derby Road Depôt or Walker Street, for levelling up where new houses are being erected.

I understand Mr. Lynam is progressing with the plant, etc., decided upon respecting the removal of the clinker to our Sewage Farm, but some little time must elapse before it is completed.

Our output of old galvanized iron for the year is sold to Mr. S. Davis, Metal Dealer, Adderley Street, Birmingham, at 8/- per ton, f.o.r. I have also sold the old tins at 10/- per ton to the same person. Except for the last 6 months of the previous year when Mr. Davis purchased the tins at the price now quoted, the old tins were carted to tips and buried.

The general repairs have again been carried out without much trouble being experienced—most of the refuse that could not be dealt with at the time was tipped near the Destructor Works, and burnt at the most favourable opportunity.

The Electric Light supply has again been satisfactory—no failure of any note having taken place.

The estimated cost of working the Destructor and maintenance of plant was fixed at £1,120 and the approximate cost is £1,117.

Taking the Night Soil Department and Destructor together, the expenditure during the year is £268 under the estimates.

Your obedient Servant,

F. TURNER,

Superintendent.

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